

ABSTRACT

A projection-type display apparatus for projecting an image onto a screen includes a light source, a signal processing unit for processing an input image signal to output a first image signal representing first primary-color information R_1 , G_1 , and B_1 representing values of red, green, and blue components of an image to be projected, a signal conversion unit for converting the first image signal into a second image signal representing a coefficient M which depends on luminance of the image to be projected defined by the first primary-color information R_1 , G_1 , and B_1 , and into a third image signal representing second primary-color information $R_2 = R_1/M$, $G_2 = G_1/M$, and $B_2 = B_1/M$. The projection-type display apparatus also includes a first light valve for modulating light received from the light source in accordance with the coefficient M , the light changing in color among red, green, and blue, a second light valve for further modulating the light received from the first light valve in accordance with the second primary-color information R_2 , G_2 , and B_2 in sequence, and a projection unit for throwing the light received from the second light valve onto the screen.